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Judy Greenlea Taylor, DDS, FICD Date

ALL SMILES MATTER:
THE ROLE OF THEORY AND FRAMEWORKS IN ADVOCACY TO ADVANCE ORAL HEALTH EQUITY THROUGH POLICY

By

Judy Greenlea Taylor, DDS, FICD
Master of Public Health

Prevention Science

_____ _____
Jean O'Connor, JD, MPH, DrPH Date
Committee Chair

_____
Dr. Arlene Lester, DDS, MPH Date
Committee Member

_____
Laurie Gaydos, PhD Date
Associate Chair for Academic Affairs, Executive MPH Program

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Submitted by

Judy Greenlea Taylor, DDS, FICD
B.S., Prairie View A & M University, 1987
D.D.S., University of Iowa, 1991

Master's Committee
Committee Chair: Dr. Jean O'Connor
Field Advisor: Dr. Arlene Lester

An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health in Prevention Science
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Abstract

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By Judy Greenlea Taylor, DDS, FICD

Despite major improvements in oral health for the population as a whole, oral health disparities are profound in the United States. Access to oral health services remains a major public health issue in the United States. Dental professional organizations have made improving access to oral health care and decreasing oral health disparities a major focus of their research efforts and national agendas. The Patient Protection and Affordable Care Act (ACA) marked a historic expansion of health care access and is a significant step in eliminating health disparities nationwide, making health insurance more accessible and affordable for Americans by expanding Medicaid, yet there are still challenges with implementation. Provisions for adult oral health care and provider access is very limited. There is an emerging body of evidence that shows the practice of oral health advocacy has advanced, however its theoretical groundings have not. This is certainly not for a lack of theories of policy processes, but for a lack of application to advocacy. Theoretically-grounded oral health advocacy is a key public health strategy not only to make policy systems work better, particularly for vulnerable and underserved populations, but also to counteract the efforts of opposing interest groups to implementation of good public health practice. The purpose of this modified systematic literature review and general literature review was to identify policy process theories/frameworks successfully applied that informed understanding of the linkages between the policy process, advocacy activities and outcomes in public policy action to improve public health issues such as oral health equity. In the preliminary review of the literature, there were five theories/frameworks encountered that revealed most promising and relevant to this study: 1) The Advocacy Coalition Framework, 2) Multiple Streams Theory, 3) Messaging and Frameworks Theory 4) Media Influence Theory and (5) The Racial Equity Framework. Although oral health disease compounded with health equity issues is a complex intricate public health issue, the results from this research revealed that policy process theory can play a vital role in informing advocacy activities and understanding the linkages between the policy process and positive outcomes to improve public health.

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CHAPTER 1: INTRODUCTION

Good oral health is essential to good overall health, yet millions of Americans lack access to basic, affordable oral health care. Nationally, dental caries (tooth decay) is four times more common than childhood asthma and seven times more common than hay fever (Centers for Disease Control and Prevention, 2013). In the most recent national examination survey, 85% percent of U.S. adults had at least one tooth with decay or a filling on the crown; almost half (47.2%) of U.S. adults' ages 35 to 44 have gingivitis, a reversible inflammation of the gingivae (gums), and about one-fourth have the more severe condition of periodontitis (CDC, 2013). Oral and pharyngeal cancer is the sixth most common cancer in the developed world; each year, an estimated 28,900 Americans are diagnosed with this disease (CDC, 2013).

The impact of unmet oral health care needs is magnified by the well-established connection to overall health. Research suggests that inflammation associated with periodontitis may increase the risk of heart disease and stroke, premature births, difficulty in controlling blood sugar in persons with diabetes, and respiratory infections (CDC, 2013).

Oral health is related to well-being and quality of life as measured along functional, psychosocial, and economic dimensions. A 2008 report by the U.S. Department of Health and Human Services (HHS) states that illness related to oral health results in 6.1 million days of bed disability, 12.7 million days of restricted activity and 20.5 million lost workdays annually (Franchi & Bumgardner, 2013). The social impact of oral diseases in children is substantial. "More than 51 million school hours are lost each year to dental-related illness. Children from low-income families suffer nearly 12 times more restricted-activity days than children from higher-income families. Pain and suffering due to untreated diseases can lead to problems in eating, speaking, and attending to learning" (NIDCR, 2014a).

Despite major improvements in oral health for the population as a whole, oral health disparities are profound in the United States by socioeconomic status, gender, age, geographic location and are well documented in minority populations such as African Americans, Hispanics, American Indians/Alaska Natives, and other racial/ethnic minority groups (CDC 2015). Individuals in these groups bear a disproportionate burden of disease and disability, and these disparities result in decreased quality of life, loss of economic opportunities, and perceptions of injustice (Garcia, Cadoret, & Henshaw, 2008)

A central task of American medicine is working within and outside the health care system to eliminate inequities in access to and delivery of care. Access to oral health services remains a major public health issue in the United States, with only 61 percent of adults 18 years and older visiting a dentist's office in 2013 (CDC, 2015). Emergency room visits for preventable dental conditions cost $1.6 billion in 2012 (American Dental Association, 2015). Leading dental professional organizations have made improving access to oral health care a major focus of their research efforts and national agendas, with the mission to advocate that "**all smiles matter**".

What many oral health stakeholders agree upon, is that oral disease burden in underserved populations is in part a consequence of empirically demonstrable barriers to oral healthcare (National Dental Association, 2012). The most common are financial hardship, geographic location, workforce imbalances and low levels of oral health literacy. Language, education, cultural and ethnic barriers may compound the problem (Institute of Medicine, 2011). The American Dental Association states: "No law, regulation or mandate will improve the oral health of the public unless policymakers, patients and dentists work together with a shared understanding of the importance of oral health and its relationships to overall health" (ADA, 2015). Despite many challenges for oral health stakeholders in the country, the "case for change"

has never been more evident with the need for strategies and policy solutions to reduce these barriers in order to attain the highest level of oral health for all people.

Advocacy has been recognized as one of three major strategies for achieving health promotion goals, the others being enablement and mediation (World Health Organization, 1986). The World Health Organization describes advocacy for health as a "combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or program" (Carlisle, 2000).

"Blending science, ethics and politics, advocacy is a self-initiated, evidence-based, strategic action that health professionals can take to help transform systems and improve the environments and policies which shape their patients' behaviors and choices, and ultimately their health" (International Council of Nurses, 2008).

Public health advocacy can be applied at personal/professional, patient and policy system levels. While action in all these areas is needed, this paper specifically focuses on the policy system to better understand the role of advocacy at this level to achieve oral health promotion goals. Such 'systems' include any institution, agency, governmental or non-governmental, public or private, national or international, with which health professionals work, that can, through their policies and power, influence public health and health care systems (ICN, 2008).

Many oral health advocates and organizations work tirelessly to influence public policies affecting the practice of dentistry and the oral health of the American public. Theoretically-grounded oral health advocacy is a key public health strategy not only to make policy systems work better, particularly for vulnerable and underserved populations, but also to counteract the efforts of opposing interest groups to implementation of good public health practice.

Problem Statement

In the last decade, with federal and state leadership, policy proposals have proliferated in addressing the barriers to oral health care that hinder achieving oral health equity. For example, important progress in addressing gaps in low-income children's access to dental care, boosting children's use of preventive and primary dental services have been made through legislation such as the Affordable Care Act (ACA) Medicaid and the Children's Health Insurance Program (CHIP) (Kaiser Family Foundation, 2016). The ACA marked a historic expansion of health care access and is a significant step in eliminating health disparities nationwide, making health insurance more accessible and affordable for Americans by expanding Medicaid. The challenge is there are still significant obstacles in state implementation. Additionally even with a robust dental benefit package for children, securing access to dental providers and services has remained a key challenge.

The situation for low-income adults has proven to be an even greater obstacle. Dental benefits for Medicaid adults are not required by federal law, but are offered as a state option, and most states provide only limited coverage, in many cases, restricted to dental extractions or emergency services (ADA, 2013). A Medicare program, which covers elderly adults and nonelderly adults with disabilities, provides no dental benefits. Nearly 130 million Americans do not have dental insurance and nearly one in eight cited cost as a reason for forgoing dental care (National Conference of State Legislators, 2013). Furthermore, while oral health care is included as an "essential health benefit" in the (ACA) for children, it is not for adults.

A key role in all of this is that states have a variety of leverage points to improve oral health. State policy options can improve access to oral health care, reduce oral health disparities, address oral health workforce issues, integrate oral health and primary care, and use public health

models and data to achieve better oral health outcomes (Foreman & Blackman, 2013). It is incumbent upon public health leaders at the federal, state and local level to assess the legal, political, cultural, and economic environment in their communities in order to effectively choose advocacy strategies and focus efforts to improve these policies and propose others toward a system of equitable care. Key to this assessment is the assumption that public advocacy actually *can* affect policy making.

Much of the focus to date has been on evidence informed public health policy, specifically the review of evidence and its provision in an appropriate format for decision-makers. However a key challenge is evidence is only one of many inputs into policymaking and often not the most important. There is an emerging body of evidence that shows the widespread practice of policy advocacy has advanced however the theoretical foundations of it are narrowly addressed. Limited information in the academic and scholarly literature directly and holistically addresses the theoretical linkages between policy advocacy activities, their requisite resources and knowledge, and their expected outcomes. This gap is even more amplified as it relates to policy advocacy efforts centered on the public health issue of oral disease compounded by health equity issues. This is certainly not for a lack of theories of policy processes, but for a lack of application to advocacy.

Without understanding these linkages and road maps to the policy process in the form of a theoretical framework, dental organizations and oral health advocates may miss vital opportunities to be better informed on how to optimally influence public policies that could promote oral health equity. This study begins to address this gap in the literature by examining the phenomenon of theory used in public health advocacy as demonstrated in policy analysis case studies.

Conceptual Framework and Theoretical Foundation

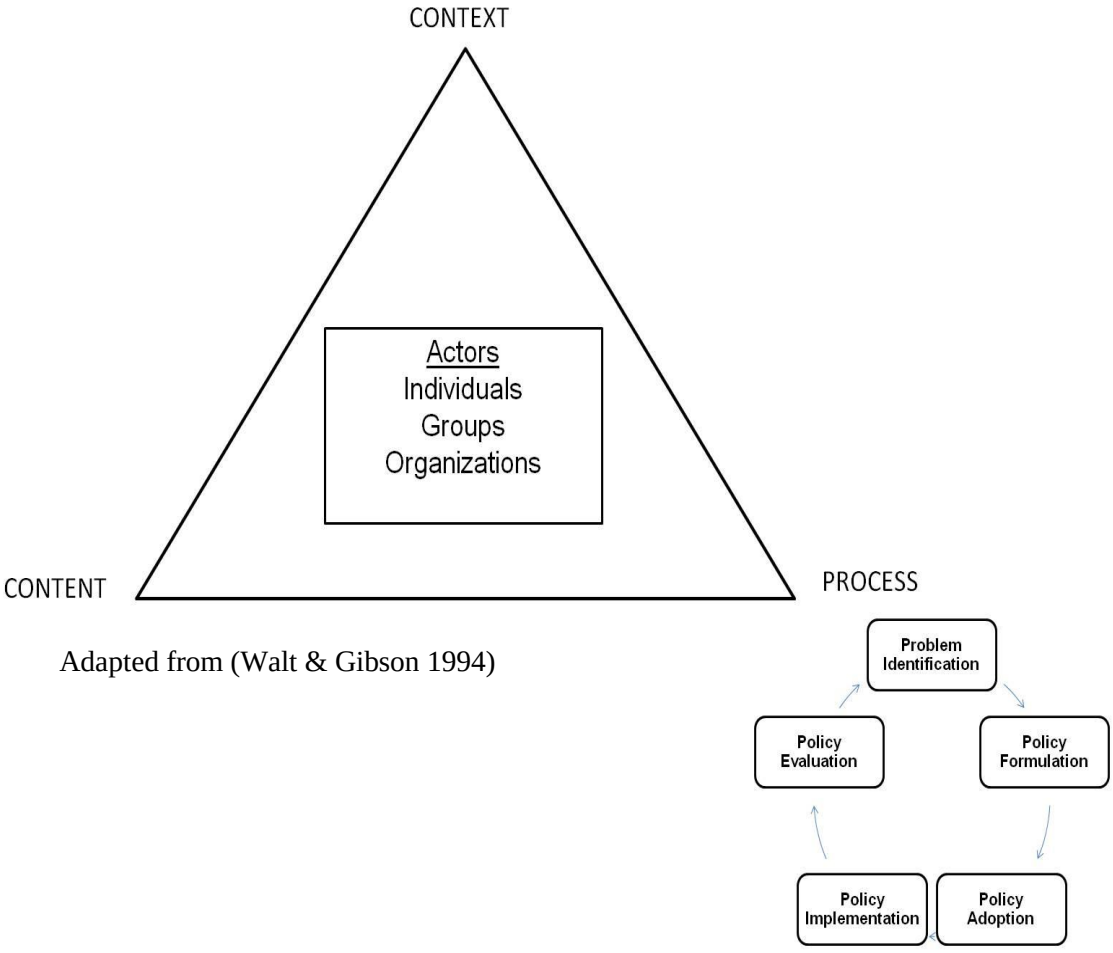
"Analysis of public health policies is an inexact process wrought with uncertainties. It is, however, an essential segment of social learning and adaptation that brings attention to the complex relationship between decision making and public health outcomes" (United Nations Environment Program, 2015). It provides baseline information, points out major linkages between the policy process and outcomes, and provides a starting point for consideration of more sustainable policy options (UNEP, 2015).

An initial challenge was identifying a framework that could guide this systematic review because many models of the policy process focus on evidence synthesis but provide less insight into the links of why polices are formulated or implemented or not and the actors and activities involved. Based on its political nature, it is observed that many modern frameworks for the analysis of health policy attempt to foster a more coherent understanding through a political contextual approach. In an early study, Walt and Gilson (1994) argue strongly that much health policy was seen to neglect actors involved in policy reform and focused instead on reform content (Walt & Gilson, 1994). Their findings introduced the policy analysis triangle model that is observed to be a trend-setter for modern analytical approaches in health policy. It can be used retrospectively or prospectively.

This study used an adapted version of the Walt and Gibson policy triangle model (see Figure 1) as well as identified policy process theory frameworks to guide the study design and frame the analysis of this research. The health policy triangle offers a model of policy analysis that captures some of the comprehensiveness of the policy process. The framework stresses the importance of going beyond the content of a policy when studying the policy process and emphasizes the importance of actors, the processes, and the context. The policy triangle

considers how these aspects of policy interact and shape the policy process. It encompasses actors as the focal point of the analysis with a triad of political angles, including: context, content and process. This model is seen to be particularly useful for identifying how policy is shaped through the interaction of political elements and dimensions (Buse, 2008; Walt et al, 2008) in (Steinbach, 2009). The underlying theme of an effective health policy analysis framework is observed to not focus on reform content (or the 'what' of policy), but rather on actors, context and process as well (or the 'who' and 'how' of policy) (Buse et al, 2005) in (Steinbach, 2009). When applied to a specific context this is seen to manifest with more clarity and definition.

Figure 1 Conceptual Framework for Public Policy Analysis



Adapted from (Walt & Gibson 1994)

Health policies are formed through the complex inter-relationship of context, process and actors. Table 1 represents a description for each of these components as described in (Steinbach, 2009).

Table 1 Description of Components of the Policy Triangle

Context	**Actors**	**Process**
Context means systematic factors - political, economic, social or cultural, both national and international - which may have an effect of health policy. These include: **Situational factors**- transient, impermanent conditions which can have an impact on policy (e.g. wars, droughts) **Structural factors**- relatively unchanging elements of society (e.g. the political system, type of economy, demographic features) **Cultural factors**- religion, ethnicity, gender	**Actors** refer to individuals, organizations or the state, and their actions that affect health policy. All actors have their own interests and agendas. Examples of actors include individuals, national NGOs, pressure/interest groups, Healthcare professional organizations, bilateral agencies, funding organizations, private sector companies, and the media.	**Process** is the way in which policies are initiated, developed or formulated, negotiated, communicated, implemented and evaluated. Policy formation falls into the process corner of the framework above and is influenced by actors, content, and context. It is a process of negotiation and bargaining in order to satisfy various interests and build a coalition of support. Policy formation varies according to the nature of the policy and the organizational structure in which it is made (i.e. actors, content, and context) but often includes assembling information, developing arguments, developing alternatives, and persuading others.
Content is the substance of a particular policy which details the subjects and topics covered.		

Additionally to this conceptual model, this study is framed and guided by policy theories. There is a set of beliefs and assumptions about how change will happen, and these beliefs shape advocates thinking about what conditions are necessary for success, which tactics to undertake in which situations, and what changes need to be achieved along the way. When articulated as policy theories, these strategy and belief system roadmaps can clarify expectations internally and externally, and they can facilitate more effective planning and evaluation (Stachowiak, 2013). A policy theory typically addresses the linkages among the strategies, outcomes, and goals that support a broader mission or vision (Stachowiak, 2013).

There are multiple existing theories and frameworks of the policy process and it is beyond the scope of this research and review to consider all of them. In the preliminary review of the literature, there were five theories and frameworks that were encountered and revealed most promising and relevant to guide this study: 1) The Advocacy Coalition Framework, 2) Multiple Streams Theory, 3) Messaging and Frameworks Theory 4) Media Influence Theory and (5) The Racial Equity Framework. Since understanding the findings from this study are dependent upon familiarity with the frameworks, a brief overview is provided.

Advocacy Coalition Framework

The Coalition theory, developed by Paul Sabatier and Hank Jenkins-Smith and commonly known as the "Advocacy Coalition Framework," proposes that individuals have core beliefs about policy areas, including a problem's seriousness, its causes, society's ability to solve the problem, and promising solutions for addressing it (Sabatier, 1999) in (Weible et al., 2011). Advocates who use this theory believe that policy change happens through coordinated activity among individuals with the same core policy beliefs (Stachowiak, 2013).

Underlying assumptions (Stachowiak, 2013):

1. Coalitions are held together by agreement over core beliefs about policies. Secondary beliefs are less critical to alignment (e.g., statutory revisions, budgetary allocations, etc.)
2. Because individuals and groups already share the same core policy beliefs, coalitions can have diverse members but effectively coordinate because of reduced "costs"
3. Policy core beliefs are resistant to change. Policy core beliefs are unlikely to change unless: Major external events such as changes in socioeconomic conditions or public opinion are skillfully exploited by proponents of change - New learning about a policy surfaces that changes views.

4. Policies are unlikely to change unless: - The group supporting the status quo is no longer in power - Change is imposed by a hierarchically superior jurisdiction.

Coalitions typically will explore and pursue multiple avenues for change (e.g., engaging in legal advocacy and changing public opinion), often simultaneously, to find a route that will bear fruit. Coalitions should identify and reach out to diverse groups with similar core policy beliefs (e.g., unlikely allies) (Stachowiak, 2013).

Multiple Streams Theory (Agenda Setting)

John Kingdon's classic theory of agenda setting, Multiple Streams theory, attempts to clarify why some issues get attention in the policy process and others do not. He identified three "streams" in the policy process: 1) Problems: the way social conditions become defined as problems to policymakers, including the problem's attributes, its status, the degree of consciousness, and whether the problem is perceived as solvable with clear alternatives; 2) Policies: the ideas generated to address problems; 3) Politics: political factors, including the "national mood" (e.g., appetite for "big government"), interest group and advocacy campaigns, and changes in elected officials (Stachowiak, 2013).

To increase the likelihood that an issue will receive serious attention or be placed on the "policy agenda," at least two streams need to converge at critical moments or "policy windows". Policy windows are "windows of opportunity" when there is the possibility for policy change. Laraway et al (2002) " notes from an excerpt of (Kingdon, 1995, p. 165) that a policy window is an opportunity for advocates of proposals to push their pet solutions, or to push attention to their special problems" . It further explains that these advocates wait in the shadows with their solutions until problems pass. Then, they are able to attach their solutions to the problem. They

also wait for something to take place in the political stream that will strengthen the chances of their solution being accepted by policy makers.

Underlying assumptions (Stachowiak, 2013):

1. Policy streams operate independently.
2. Advocates can couple policy streams when a policy window opens. For example, advocates can attach their solutions to a problem that has risen on the agenda (even if its rise was independent of their efforts).
3. Success is most likely when all three components (problem, policies and politics) come together during a policy window.
4. Policy windows can be predictable (e.g., elections, budget cycles) and unpredictable (e.g., a dramatic event or crisis). They also can be created.
5. The way problems are defined makes a difference in whether and where they are placed on the agenda. Problem definition also has a value/emotional component; values and beliefs guide decisions about which conditions are perceived as problems.
6. Often there are many competing ideas on how to address problems. To receive serious consideration, policy options need to be seen as technically feasible and consistent with policymaker and public values. To effectively recognize and take advantage of open policy windows, advocates must possess knowledge, time, and relationships.

Messaging and Frameworks Theory

With the Messaging and Frameworks theory, also known as Prospect theory, (Amos Tversky and Daniel Kahneman, 1981), challenged a conventional school of thought that suggests people make rational decisions by weighing different options' costs and benefits and then choosing the one that will benefit them the most (Tversky, Kahneman, Tversky, & Kahneman,

2007). Their research proved that individuals develop different preferences based on the ways in which options are presented or framed.

The problem definition phase begins when a problem is framed in a manner that identifies it as a public matter that is amenable to policy action (Burstein, 1991, Houston and Richardson, 2000, Rein and Scion, 1996 and Stone, 1989) in (Embrett & Randall, 2014b). Framing issues in this way is extremely difficult and considered by some experts to be a "major political accomplishment" (Kingdon, 1984, p. 121), given that there are typically other competing definitions of a problem being promulgated (Embrett & Randall, 2014b). Effective framing of an issue may be achieved through deliberate use of language and symbols that highlight the harms and/or benefits of the policy option or current policy consequences in a causal way (Rochefort and Cobb, 1993)as cited in (Embrett & Randall, 2014b). These causal stories are often told using strategic language by groups with vested interest in a proposed solution. If suitably framed, the probability of an issue progressing onto the policy agenda is greatly enhanced. Moreover, the framing of a problem can in and of itself advance some policy solutions while eliminating others (Embrett & Randall, 2014a).

Underlying Assumptions (Stachowiak, 2013):

1. Even though the results may be the same, people may make different choices given different contexts or scenarios.
2. Issues and choices can be framed in multiple ways. The frame individuals use to make decisions is controlled partly by the way a problem is presented and partly by a decision maker's norms, habits, and personal characteristics.
3. Decision making can be inconsistent. People may make choices that are less beneficial to themselves or riskier than might be expected based on how information is presented.

Media Influence Theory (Agenda Setting)

Max McCombs and Donald Shaw's Agenda-Setting theory, informally known as Media Influence theory, suggests that mass media, namely news media, significantly influences the public agenda (McCombs, 2005). Political issues that are salient and ever-present in the media tend to be the same issues that the public have awareness of and consider key. Media may or may not shape what constituents think about issues, but it generally determines which political or campaign issues voters prioritize (Stachowiak, 2013). This theory was formulated prior to the social media era, and has since made way for these channels.

Underlying Assumptions (Stachowiak, 2013):

1. Media shapes reality, as opposed to reflecting it.
2. The media does have a point of view, and sometimes extreme biases
3. Different media sources have different agenda-setting potential. The size of the audience, the consistency and emphasis of the message, and the degree to which the source is perceived as credible, affect this potential.
4. In modern society, the news media is generally one's primary source of political information. People vary in their appetite for, and attention to, mass media and in their level of political interest.

Racial Equity Framework

A newer framework based on theory discovered in the initial scoping of the literature is the Racial Equity Framework. This framework developed by the Greenlining Institute is focused on the implementation phase of the policy process. It specifically relates to the implementation of the Affordable Care Act but could justly be applied to other legislation. Often the concepts of equity and equality are intertwined but interestingly this literature from the Greenlining Institute

asserts that an equality strategy ends up with one group benefitting more than the other and an "equity" strategy focuses on achieving comparable favorable outcomes across racial and ethnic groups, regardless of the resources and input allocated (Dennis, Pearson, & Saporta, 2013).

This framework has aspects of the other theories identified, specifically the theory of framing and messaging. It uses an intersectional lens to recognize differences within and across communities impacted by racial and ethnic oppression. The theory of intersectionality describes the ways in which race, ethnicity, class, sex, gender identity, sexual orientation, ability, nationality, age, geography, and other markers of difference intersect to explain and inform an individual's life experiences (Dennis et al., 2013). This theory is based on the premise that overlooking diversity within racial and/or ethnic groups can be problematic, as the existence of intersecting identities can change the degree to which members within and across racial and ethnic communities are able to access various programs and policies. For instance, marginalized individuals and groups within communities of color, including but not limited to youth, LGBTQ individuals and women, may face limitations or experience discrimination when trying to access educational opportunities or when trying to access resources like health care services from government agencies (Dennis et al., 2013). A racial equity lens can aid policymaker and advocates representing communities of color in reframing "traditional racial justice issues" and supporting policies that promote the well-being of all people.

The racial equity framework consists of a set of Guiding Principles that describe a vision of what equity could look like within policy implementation and a set of Guiding Questions that help policymakers and change agents consider the social and environmental landscape of communities in which they will implement new policies and, thus, ensure equitable and positive impact of policies in all communities (See Appendix 1).

Purpose Statement

The purpose of this modified systematic literature review and general literature review was to identify policy process theories/frameworks successfully applied that informed understanding of the linkages between the policy process, advocacy activities and outcomes in public policy action to improve public health issues such as oral health equity.

Research Question

Two-fold question for the preliminary review and the modified systematic review respectively: 1) Which promising frameworks are most encountered and could be relevant to the topic of oral health equity issues? 2) Which frameworks have been successfully applied that informed understanding of the linkages between the policy process, advocacy activities and outcomes in public policy action to improve public health issues such as oral health equity?

Significance Statement

This research has both practical and theoretical significance. While there is much debate among oral health stakeholders of the key barriers to access to oral health care, what is agreed upon is the need to address them through viable and sustainable policy solutions. Evidence and data are always key essentials to the gateway of policy doors, especially with health equity issues, but the findings from this study contribute to the public health and oral health literature by examining retrospectively and prospectively through policy analysis an important avenue by which theoretical grounded advocacy enters the policy process.

By predicting the links between advocacy activities and specific outcomes, this could help public health professionals; dental professional organizations and oral health stakeholders with strategically planning their advocacy efforts in order to: 1) optimally influence public health policies for oral health equity, 2) broaden applicability of theories, and 3) guide further research.

CHAPTER 2: BACKGROUND

The concept of theories and frameworks used in public health advocacy is the principle phenomenon of interest in this study. What is equally of interest is how they can be applied to advocacy efforts to improve and promote sustainable public health policy around an intricate and challenging issue of oral health equity. To better understand the concepts that are intertwined in this study, this chapter provides background information to facilitate an understanding of the problem of oral health disparities as it relates to the policy process and public health advocacy.

The Impact of Oral Disease

The Evidence for Policy-Making

The Awakening

National attention has been drawn to the impact of oral disease in the last decade through tragic events and initiatives designed to study and address oral health disparities, access to oral health care and the prevention of oral disease. In 2007, twelve year old Deamonte Driver tragically died as a result of a bacterial infection from a tooth that fatally spread to his brain. Due to perceived failed systems in Medicaid, provider participation and Deamonte's inability to receive timely access to care and dental treatment that could have saved his life, this garnered national attention (Huffington Post, 2011). His death was widely publicized in the Washington Post and other media outlets throughout the nation. The publicity caught the attention of members of Congress and state legislators as well. It prompted Democratic Senators Benjamin Cardin of Maryland and Jeff Bingaman of New Mexico to introduce legislation designed to provide dental coverage to children in low-income families that lack coverage (George, 2013). In 2009 the President signed into law the Children's Health Insurance Program Reauthorization Act that, for the first time, addressed children's oral health and dental care (George, 2013).

In 2010, the Department of Health and Human Services launched Healthy People 2020, its 10-year agenda for improving the Nation's health. For the first time, which is in its fourth iteration, identified oral health in its list of 12 leading health indicators (LHIs), intended to communicate a high priority health issue (HealthyPeople.com, 2015).

Oral Health Disparities and Access to Care

Health equity is often defined as the absence of systematic disparities in areas of health between more and less advantaged social groups (Braveman, 2003). Individuals who face the greatest barriers to care are often among the most vulnerable members of our society. Non-Hispanic blacks, Hispanics, and American Indians and Alaska Natives generally have the poorest oral health of any of the racial and ethnic groups in the U.S. population (Centers for Disease Control and Prevention, 2015). These groups tend to be more likely than non-Hispanic whites to experience dental caries in some age groups, are less likely to have received treatment for it, and have more extensive tooth loss. African American adults in each age group are more likely than other racial/ethnic groups to have periodontal (gum) disease (CDC, 2015). Compared with white Americans, African Americans are more likely to develop oral cancer, are less likely to have it diagnosed at early stages, and experience a worse 5-year survival rate (CDC, 2015).

Socioeconomic status, as measured by poverty status, is a strong determinant of oral health (Institute of Medicine, 2011). In every age group, persons in the lower-income group are more likely to have had dental caries and more than twice as likely to have untreated dental caries in comparison to their higher-income counterparts (Weintraub, Prakash, Shain, Laccabue, & Gansky, 2010). Fewer dentists work in rural areas than urban areas. Geographic distribution of oral health professionals in relation to the general public has a considerable impact on access to oral health care (Institute of Medicine, 2011). One of the greatest barriers for older adults and

patients with special needs is difficulty finding dentists to care for these patients due to the relative lack of training in the special needs of these patients (Ettinger, 2010).

Two of the most common barriers to access to oral health care with policy implications are: financing oral health care and ensuring a diverse, sustainable oral health care workforce.

1) **Financing Oral Health Care-** Currently, fewer than ten percent of all dentists participate in Medicaid, and there are limited adult dental benefits.(National Conference of State Legislators, 2013). One recent report found that individuals who lacked dental insurance were about two-thirds less likely than people with private insurance to have had a dental visit within the last year (16.1 percent compared with 50.9 percent) (Agency for Healthcare Research and Quality, 2015)
2) **Workforce issues-** Lack of and geographic distribution of providers creates access challenges. As of 2014, there were 4,900 Dental Health Professional Shortage Areas (HPSA). It would take 7,300 additional practitioners to meet every HPSA community's need for dental providers (Health Resource Service Administration, 2015). A recent study by the American Dental Association regarding workforce supply-related issues, found that this barrier needs to be considered in the context of the ACA. As a result of the ACA, up to 8.7 million children are expected to gain dental benefits by 2018 (Nasseh, Vujicic, & O'Dell, 2013). Of this total, 3.2 million will gain dental benefits through Medicaid. Approximately 8.3 million adults are eligible to gain Medicaid dental benefits in 2014. In addition, through April 19, 2014, about 1.1 million adults obtained private dental coverage through stand-alone dental plans in the new health insurance marketplaces (Nasseh et al., 2013). The large number of individuals gaining dental benefits will likely

result in increased demand for dental care and may lead to increases in supply-related barriers in the future

Healthy Public Policy

The Challenges of Existing or Proposed Legislation

The Ottawa Charter for Health Promotion, (WHO 1986) called for building healthy public policy. It notes that health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health (World Health Organization, 2015). (WHO) notes that "healthy public policy" is characterized by an explicit concern for health and equity in all areas of policy and by accountability for health impact (WHO, 2015). Government policies which promote greater health equity (HE), often referred to as "healthy public policies," are essential. Despite this acknowledgment, efforts to persuade governments to implement healthy public policies have had limited success and inequities in health continue to grow (Braveman et al., 2011, CSDH, 2008, Marmot, 2005, OECD, 2011 and Wilkinson and Marmot, 2003) in (Embrett & Randall, 2014b).

The Affordable Care Act (ACA) and Medicaid Expansion

In 2012, the Affordable Care Act (ACA) became the largest piece of health care reform passed in American history. Its key proposed provisions included establishment of the Individual Mandate as well as Medicaid expansion to cover basic health services for Americans with incomes of up to $30,733, or 133 percent of the poverty level (American Dental Association, 2015). As noted previously, many states have limited to no benefits for Adults. Many state Medicaid programs include benefits for pregnant women; however this coverage immediately terminates after the pregnancy. Concerns still abound if it is being equitably implemented.

Emerging Workface Models Legislation

In light of the Deamonte Driver case and other events, as this national discussion ensued, oral health professionals as well as associations and advocates representing vulnerable populations weighed in on the debate. Data emerged identifying the maldistribution of the dental workforce, mismatch between dental system capacity and vulnerable populations in need of dental services and the lack of a representative workforce that mirrors the population in the U.S. (Office of the Surgeon General (U.S.), 2003). The need for a more flexible, efficient workforce pointed to a need for legislative changes to allow for alternative models of delivery(Gwozdek, Tetrick, & Shaefer, 2014). The emerging workforce models, specifically the mid-level dental practitioner [Dental Health Aid Therapists (DHATs), Dental Therapists (DT) and the Advanced Dental Hygiene Practitioner ADHP)], became a part of this conversation.

Dental therapists currently practice in Alaska, Minnesota, and more than 50 countries. They were recently authorized in Maine. Diverse groups in other states are working together to bring midlevel practitioners to their communities, with 10 states having introduced legislation to authorize the providers since 2013 (Pew Charitable Trusts, 2015). Arguments on both sides of this matter have been, some advocate groups noting evidence shows the mid-level dental practitioner provides safe and competent care to patients (Gwozdek et al., 2014). Additionally by expanding the dental team, public health practices could stretch their dollars to reach more underserved people (Pew Charitable Trusts, 2015). Similarly, private practices were able to increase the number of underserved patients being treated and still achieve modest increases in overall profit. On the other side of the debate, several advocates, national and most state dental associations' oppose this workforce model, most often citing concerns for patient safety and viability in the U.S. market.

Community Water Fluoridation

Although the scientific evidence base supports Community Water Fluoridation (CWF) as the foundation for improving a community's public health by minimizing the prevalence and severity of tooth decay, many communities have not successfully initiated or continued this public health measure (American Public Health Association, 2015). Those opposed to fluoridation sow doubts about the risks and benefits of CWF, often with little scientific basis. In addition, there is often insufficient advocacy for CWF in the face of ongoing media campaigns by activists opposed to fluoridation, commonly referred to in the literature as antifluoridationists (American Public Health Association, 2015). Seventeen states, including Puerto Rico and the District of Columbia, have laws intended to provide statewide fluoridation (Fluoride Action Network 2015).

The Policy Process

Translation of the evidence into policy

What is essential in the chronicled impact and burden of oral disease noted above is that this encompasses the scientific data and evidence that entails policy-making and reform decisions. Evidence-informed policymaking sees the use of different types of information in a variety of forms and from a variety of sources, reflective of, and responsive to, the policy and practice context (Bowen & Zwi, 2005). Types of evidence that inform the policy process can be grouped as research, knowledge/information, ideas/interests, politics, and economics. Some may argue if evidence is the most import input in influencing policy, but it is essential as a tool to show effectiveness ("it works"), show the need for policy action ("it solves a problem"), guide effective implementation ("it can be done"), and show cost effectiveness ("it is feasible and may even save money") (Bowen & Zwi, 2005).

A great deal of literature and as noted in the policy triangle conceptual framework, stresses the importance of considering the evidence within the context in which it will be used is critical for effective policymaking and practice (Bowen & Zwi, 2005). The context is the environment or setting in which the policy is being developed and implemented, incorporating the historic, cultural, health services, system, and resource contexts.

The public policy process is a multi-stage cycle as identified in the conceptual framework. Policy implementation is often seen as the penultimate stage of the policy process but many factors contribute to how a problem is defined, whether a policy issue ever makes it to the government policy agenda, and whether acceptable policy options are ever formulated, long before policy adoption and implementation becomes a possibility (Embrett & Randall, 2014b). Although often oversimplified the policy process is a concept that can be pragmatically viewed as sequential phases that begin with an issue being defined as a problem and that then gets placed on the policy agenda for potential government action (Agenda Setting) (Table 2) (Sabatier, Paul and Weible, 2007). The subsequent stages are typically described as being policy formulation, decision making, implementation and finally, evaluation (Burstein, 1991).

Table 2 Policy Process

Problem Identification	The problem is defined and articulated by individuals and institutions such as mass media, interest groups, and parties.
Agenda Setting	The definition of alternatives is crucial to the policy process and outcomes. Before a policy can be formulated and adopted, the issue must compete for space on the agenda. Key actors in agenda setting include think tanks, interest groups, media, and government officials.
Policy Making	From the problems that have been identified and have made it onto the various agendas, policies must be formulated to address the problems. Those policy formulations then must be adopted.

Budgeting	Each year, Congress must decide through the appropriations process how much money to spend on each policy. Generally, a policy must first be (adopted) before money can be appropriated for it in the annual budget.
Implementation	Executive agencies carry out, or implement, policy. Implementation could include adopting rules and regulations, providing services and products, public education campaigns, adjudication of disputes, etc.
Evaluation	Numerous actors evaluate the impact of policies, to see if they are solving the problems identified and accomplishing their goals. Evaluation looks at costs and benefits of policies as well as their indirect and unintended effects. Congress uses its oversight function for evaluation, agencies evaluate their own performance, and outside evaluators include interest groups, academia, and media. Evaluation frequently triggers identification of problems and a new round of agenda setting and policy making.

Information cited from (University of Texas, n.d.)

The Role of Advocacy in the Legislative Arena

Influencing the Policy process

Advocacy work can take place at the level of both ‘cases’ and ‘causes’. Two main goals underpin health advocacy—protection of the vulnerable (representational advocacy) and empowerment of the disadvantaged (facilitational advocacy) (Carlisle, 2000). The focus of this review is on the role of representational advocacy, preventing oral health disparities and protecting rights to fair and equitable oral health care access.

At its simplest form, advocacy may be defined in terms of the activities it encompasses: for example, the representation of under-privileged groups, such as those who are disadvantaged or sick, with the aim of promoting their rights and/or redressing imbalances in power. This has been characterized as ‘case’ advocacy (Rees, 1991) in (Carlisle, 2000). Advocacy is also seen as a lobbying activity within public health and attempts to influence the policy process. This approach acknowledges that barriers to health can lie beyond the control of individuals, and that

structural factors need to be addressed if health inequalities are to be reduced. This has been characterized as "cause" advocacy (Rees, 1991) in (Carlisle, 2000).

The ultimate role of public health advocacy is communicating the identified impact of oral disease to the decision- makers in a manner that will have the most influence to facilitate change. Public health advocacy is about using data to tell a story about an opportunity for policy makers to act (J. O'Connor, **personal communication**, April 18, 2016). Understanding the right timing, actors, framing and roadmaps to do so is what leads us to the role of theory.

The Application of Theory

Advocates come from many disciplines and this interdisciplinary nature can be an added strength but can sometimes lead to lack of alignment as views and assumptions about how systems work collide. Having a framework for recognizing that are many different overarching theories about how policy change happens (e.g., Policy Windows) or theories about particular tactics (e.g., Messaging and Frameworks), can help advocates have a common language for talking about similarities and differences in approaches (Stachowiak, 2013). The application of theory to advocacy involves developing roadmaps to the policy process. In order to explain why a policy issue has or has not progressed to the policy agenda it becomes necessary to apply policy analysis theory that addresses the underlying mechanisms of the policy process.

Policy analysis theory proposes that evidence is information (information is data that has meaning) "that affects existing beliefs of important people about significant features of the problem under study and how it might be solved or mitigated"(Bowen & Zwi, 2005).

Interestingly with health equity issues, in a review of the literature a study found conducted by (Embrett & Randall, 2014b), noted that there has been limited use of policy analysis theory surrounding health equity (HE) issues. Their findings offered several possible

explanations; one of significance is that "HE as an ethical concept with normative implications is a nonstarter for health policy analysts since the term implies unfairness in the current state of distributive policies" (Embrett & Randall, 2014b). They further note, "to claim something is inequitable is to take a moral stance and place judgment and blame on specific individuals, groups, organizations and/or institutions". The complexity of health equity as a distributive issue may exacerbate the hesitancy of policy analysts to approach these problems. What is alarmingly noted in one article is that policymakers are also well aware of health equity issues and social determinants of health problems but prefer to avoid investigating the complex policies needed to address those (Baum et al., 2013) in (Embrett & Randall, 2014b).

Summary and Study Relevance

Given these facts, focusing on eliminating oral health disparities and achieving oral health equity is a multitier challenge. While many efforts to health promotion have been at the patient and empowerment level, impact of oral disease that has been defined requires for building healthy public policy. This requires placing oral health on the agendas of policy-makers. While there has been extensive progress in legislation and policy proposals addressing oral health disparities and access to care in light of national attention to the problem in the last decade, there still have been obstacles to implementation.

As identified in the problem context, oral health advocacy is widespread but the application to theory has not been valuably demonstrated in the literature. Evidence alone is rarely efficient to overcome obstacles to policy adoption and implementation. This paper will evaluate the role theory plays in this strategic advocacy effort to a complex ethical issue of equity and oral health promotion through policy by synthesizing policy analysis case studies using the identified promising theory frameworks.

CHAPTER 3: METHODOLOGY

This study examined public health policy analysis case studies that utilized policy process frameworks or theories to inform a better understanding of their role in advancing oral health policy. The primary objective of this modified systematic literature review and general literature review was to identify case studies that had applied policy theory frameworks to its analysis, which informed understanding of the linkages between the policy process, advocacy activities and outcomes in public policy action to improve the public health issue.

A crucial step in this process was a preliminary review of the literature to thoroughly define the research question. This required an understanding of existing academic and professional literature, including gaps and uncertainties, clarification of definitions related to the research question and an understanding of the way in which these are conceptualized within existing literature. Five theories and frameworks were identified that seemed most promising to inform the policy case study review. Based on the modified systematic review and the general literature review, the study provides implications specific to the issue of oral health equity.

Population

Policy analysis case studies that included application of one of the following policy process frameworks: 1) Multiple Streams Theory "Policy Window", 2) Advocacy Coalition Framework, 3) Messaging and Frameworks, 4) Media Influence Theory; or 5) The Racial Equity Framework; and a public health policy issue comparable to oral health or health equity issues.

Research Questions

The preliminary question was: 1) Which promising frameworks are most encountered and could be relevant to the topic of oral health equity issues? This question was addressed by a preliminary scoping of the literature and informed the modified systematic review question:

2) Which frameworks have been successfully applied that informed understanding of the linkages between the policy process, advocacy activities and outcomes in public policy action to improve public health issues such as oral health equity?

Using the Syrene A. Miller, PICO Worksheet and Search Strategy (See Appendix 2) as a guide, **Patient/Problem; Intervention; Comparison; Outcomes** of the research question:

P= oral health equity (or Public health issue) I= policy process theories C= N/A

O= informed understanding of the linkages between the policy process, advocacy activities and outcomes in public policy action to improve the public health issue

Literature Search Method

To identify relevant published policy analysis case studies, a search was conducted through the Emory Health Sciences Library databases for any literature based on five policy theory frameworks identified from the scoping review as they relate to oral health equity issues from 1996-2016. While most policy cases retrieved may not directly focus on oral health or health equity, a comparative assessment was made on closely related public health issues.

Databases searched included: 1) published literature: PubMed, CINAHL, Expanded Cochran, Journals @Ovid, Medline, and Science Direct. 2) Grey literature: Google search engines, cited references from public health and dental organizations websites.

Key Search Terms

An initial step was to use policy terms combined with the theory or framework and the public health issue of oral health, health equity or dental. This yielded very few citations, as a result the search was expanded to index just the policy terms with the five theories and selectively eliminate citations from title and abstract if it was not addressing a public health issue

comparatively related to oral health (including factors that influence oral health, i.e. tobacco, nutrition, etc.) or health equity issue (insurance, access to care, etc.). See Table 3 for key terms. Additionally, see Appendix 4 for further indexed search strategy of these terms.

Table 3 Key Search Terms

Policy Terms	Theory/ Framework	Public Health Issue
Policy policy analysis theory case study	policy theory Advocacy coalition framework Sabatier agenda setting policy window Kingdon Messaging and Framing Tversky or Amos McCombs Media influence Intersectionality Prospect Racial Equity	Oral health dental health equity Insurance Access to Care Affordable Care Act*

*The Affordable Care Act was search in relation to the policy theory terms since much emphasis in the general literature review had involved its relationship with oral healthcare access and equity issues. The goal was to assess any policy analysis theories used to study this legislation.

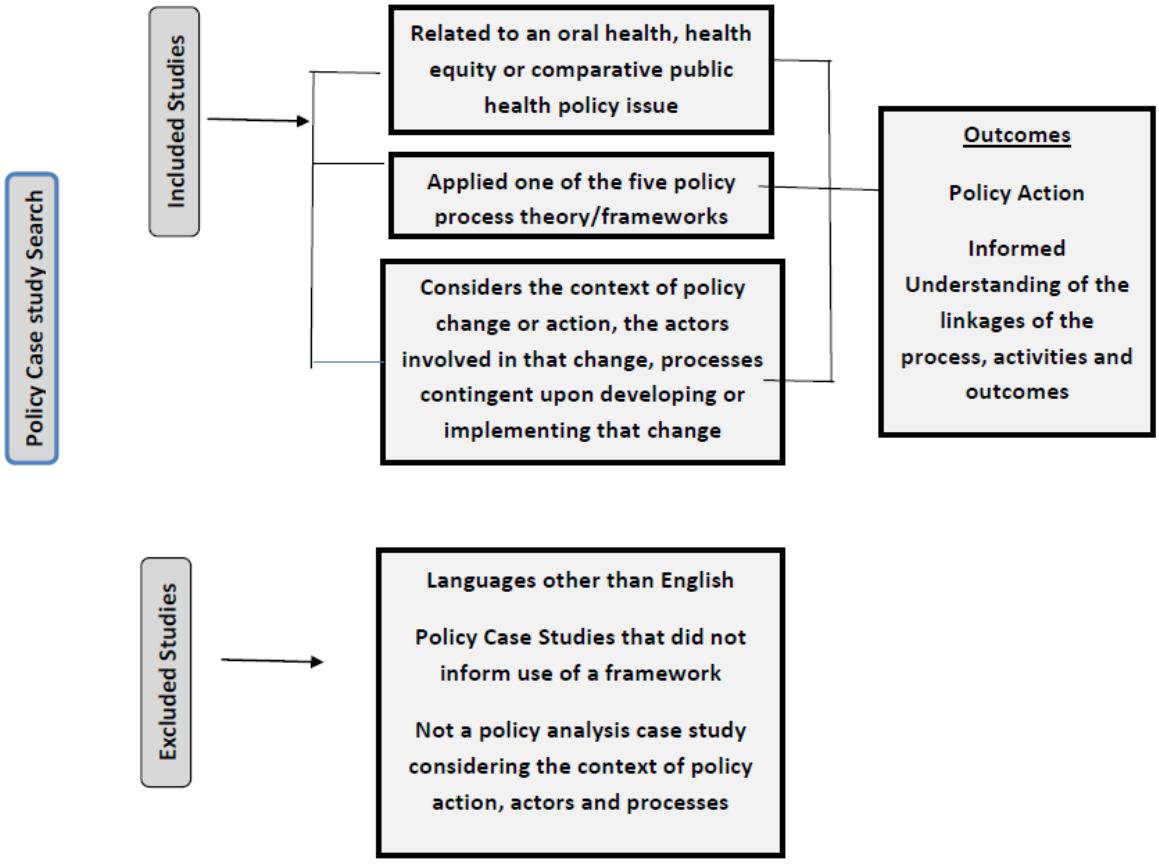
Instrument Tool

An inclusion and exclusion framework, (as shown in Table 4) was used to determine studies to include for review and analysis based on the review of the literature and theory foundations guiding the research. A diagrammatic representation of this is shown in figure 2. Assessment of relevance of the retrieved citations was made first by title and abstract, and then full assessment of text was made if initial title and abstract was unclear.

Table 4 Inclusion Criteria Exclusion Criteria

Inclusion Criteria
• Included a public health issue related to an oral health, health equity (HE) or comparatively related public health policy issue • Linked the use of the five policy process theory/frameworks identified • Policy Analysis Case (Considers the context of policy change/reform, the actors involved in that change, processes contingent upon developing or implementing that change and any outcomes)
Exclusion Criteria
• Languages other than English • Policy Analysis Case Studies that did not inform use of a framework • Not a policy analysis related study

Figure 2 Inclusion and Exclusion Criteria Based on Targeted Outcomes for this Study



Data Extraction and Quality Assurance

Using the conceptual framework, theories and study purpose as a guide, data was extracted from the studies to capture the following parameters:

1. Policy Context Considered
2. Theory or Framework applied
3. Public-health issue addressed (oral health, health equity/disparities or related)
4. Actors/Advocates involved and their activities
5. Policy Process
6. Key Findings/ Conclusions: Outcomes/Action, conditions shaping outcomes, informed understanding of linkages

Quality Assessment

To assess both the relevance and the quality of the studies retrieved, a guidance template was adapted from (Letts, et al, 2007). See Appendix 3 for the Qualitative Assessments- Critical Review Form– Qualitative Studies (Version 2.0) © Letts, L., Wilkins, S., Law, M., Stewart, D., Bosch, J., & Westmorland, M., 2007

Analysis Plan

The articles retrieved explicitly noted that a framework was used; therefore the analysis did not have to include an extra approach to identifying the framework. Data was charted using Microsoft Excel for data entry and analysis. The studies were compared using the extracted parameters. The findings are presented using diagrams, charts, tables and text.

Limitations

The methodology of this study was challenged by several factors. Originally a true systematic review was planned as a study design but due to the need to completely assess the

literature and descriptively identify findings versus simple themes that could lead to implications for oral health equity, a general review of the literature and modified systematic review was conducted.

There was lack of standardization in determining specific measures to completely assess outcomes or quality. Many studies did not address methodological considerations and it was hard to determine if some had been peer reviewed. While the initial goal was to seek studies of the United States system, these were very limited. Studies that were selected still used a democracy form of governance. Additionally, oral health disease burden is a public health issue variably different from other health issues (as noted in the problem defined, usually seeking less priority until recently) and may require different strategies in the policy arenas. This is compounded with the ethical consideration of health equity (HE). As a result, this research sought to find studies that directly related to oral health equity issues (access, insurance, etc.). While the search revealed few to no results when including indexed oral health, policy theory and policy analysis, it did provide similar studies comparable that could be used.

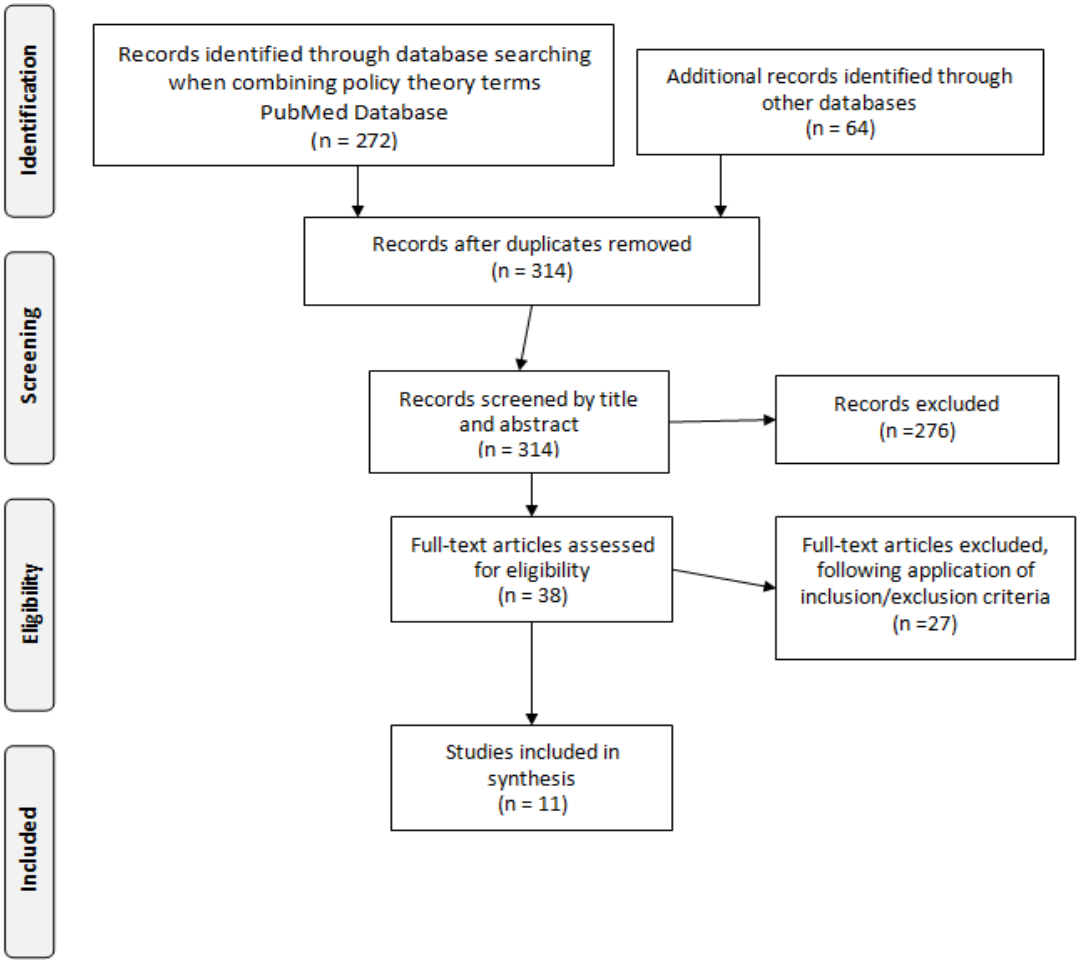
CHAPTER 4: RESULTS

Results

The literature search for policy case studies linking the five frameworks as they relate to a public health policy issue comparable to health equity or oral health disease issues identified citation pools from Medline, PubMed, and in the other published literature databases. The grey literature produced citation pools from a couple of the public health organizational websites, but most were not useful due to not considering the context of a policy change as it relates to a framework. The grey literature was the main producer of the racial equity framework citations.

As summarized in figure 3, out of the 336 studies retrieved for assessment 22 were duplicates and therefore excluded. Based on a review of titles and abstracts, an additional 276 studies were excluded because they did not meet the inclusion criteria. Studies were excluded by title and abstract if the public health issue identified was not comparable to oral health or health equity issues and could not be linked to the context of a policy analysis. A total of 38 full text articles were retrieved for further assessment. An additional 27 studies were excluded. Common reasons for exclusion included: a focus on the clinical aspect (Lab procedure, epidemiological studies, etc.) or did not include the context of one of the five frameworks or policy analysis theories as it relates to the policy process. The remaining 11 studies were assessed for quality and relevance as shown in Appendix 3.

Figure 3 Overview of Literature Search Summary



Key Findings

After using the quality assessment tool, among the 10 articles included for inclusion, the average quality rating was good for most articles. A couple of articles did not include their methodology, and those that did sometimes the approach to data collection and analysis was limited. Most were determined to be peer reviewed. The data was organized using the conceptual framework and theory parameters, identifying themes and a summary overview of each article is more extensively detailed in Table 9 for each article. This is followed by a collective narrative summary of the frameworks.

Policy Context Considered

The policy context was explicitly stated in most of the articles, and implied in others. The context will be described in Table 9.

Table 5 Policy Context

Policy context in the article	**9**
Policy context implied	**1**
Policy Context not identified	**1**

Theory/Framework Applied

Of the ten studies retrieved, most applied the Multiple Streams Theory, see Table 6. No studies solely used the messaging and frameworks theory, however many of its applications and concepts were frequently superimposed into the other frameworks.

Table 6 Theory/ Framework in Study

Multiple Streams Theory	**6**
Advocacy Coalition Framework	**3**
Racial Equity Framework	**1**
Media Influence Theory	**1**
Messaging and Frameworks Theory	**0**

Public Health Issue

While the goal and attempt was to retrieve studies related to oral health and health equity, comparable studies that related to modifying risk factors for oral disease (and are facilitators for disparities) were also included. Table 7 reflects the public health issues.

Table 7 Public Health Issue in Study

Oral Health	**3**
Health Equity Access to Care (Insurance)	**3**
Diabetes	**1**
Obesity	**1**
Nutrition	**1**
Tobacco Control	**1**
Physical Activity	**1**

Actors/Advocates

The actors involved in the studies ranged from policy entrepreneurs, patient advocates, coalitions, healthcare professionals, organizations, individuals, politicians to media. See Table 9 for comparative themes.

Advocacy Activity

The advocacy activities identified in the studies ranged from: bringing awareness to the specific public health issue, focusing events, involving media, lobbying, and coordinated activity among individuals, information gathering and aligning, and framing issues (see Table 9) for comparative themes.

Outcomes

The outcomes varied with each study. See Table 9 for overview. But Table 8 reflects the policy outcome and study outcome.

Table 8 Case Study and Policy Outcomes

Policy implementation	**5**
Policy adopted	**2**
Policy not adopted	**1**
Policy not implemented	**2**
Problem Identification	**1**
Researcher/Author informed understanding of the linkages by applying framework	**11**

Table 9 Summary of Findings

Case Study Author **Design**	**Policy Context**	**Theory/ Framework Applied**	**Public Health Issue**	**Actors/ Advocates**	**Key Advocacy Activities**	**Outcome/ Conclusions** **Key issues**
(Laraway & Jennings, 2002) Retrospective Policy Analysis Case Study	Political forces Demo-graphics of disparities	Multiple Steams Theory	Health Equity Access to Health Insurance HIFA Waivers –Medicaid for the uninsured	Interest groups Media	Media and academic attention; problem identification of access to health insurance (note- this study was pre ACA legislation)	Activities in Policy formulation phase **Policy implemented in several states** Illustrates how organized political forces put pressure on an administration to deal with the issue of the uninsured. HIFA waivers were seen as a viable solution to a pressing problem-hence a window opened. Theory informed understanding of the policy issue
(Dennis et al., 2013) Prospective Policy Analysis Case Study	Social Cultural context People of Color	Racial Equity Framework Messaging and Framing	Racial Equity in implementing the Affordable Care Act (ACA)	Patient advocates Consumer advocates	Coordinated activity among individuals, stakeholders to ensure equitable action in implementing the ACA in CA.	Activities in Policy Implementation phase of the ACA **Policy Implemented, results of equitable implementation not identified** Highlights the need to gather information and evidence, and frame issues effectively to ensure equitable allocation Theory informed understanding of the policy issue

(Craig, Felix, Walker, & Phillips, 2010) Retrospective Policy Analysis Case Study	School Environments affected Youth	Multiple Steams Theory Messaging and Framing	Childhood Obesity	-Primary Entrepreneur- Speaker of the House Herschel Cleveland - Secondary Entrepreneur Public Health Professionals	Focusing events Raising awareness Providing generated policy alternatives	Activities in Agenda setting phase **Policy enacted** Highlights the importance of a policy entrepreneur to take advantage of window Theory informed understanding of the policy issue
(Mc Hugh, Perry, Bradley, & Brugha, 2014) Retrospective Policy Analysis Case Study	Health System in organizational and financial upheaval	Multiple Steams Theory	Diabetes	Health care professionals and non-governmental organizations	Lobbying campaigns, awareness, alternatives presented	Policy Implementation phase **Policy not enacted but incremental progress** Highlighted the importance of timing and reflecting a costly epidemic. Proposals were aligned with the wider national strategy. Theory informed understanding of the policy issue
(Dinour, 2015) Retrospective Policy Analysis Case Study	Change in socio-economic status	Advocacy Coalition Framework	Poor nutrition in schools	Child advocacy groups, food/school food groups, and health/medical Groups	Achieve stakeholder buy in , neutralize opposition	**Policy adoption** and implementation phase **Several State Bills enacted** Highlights from this study suggest within the policy subsystem, a major challenge was the need to increase cohesion among advocacy coalitions. With few exceptions, advocates reported conceding to bill changes in order to achieve stakeholder buy-in and neutralize opposition.

						Theory informed underrating of state implementation
(Singh, Myburgh, & Lalloo, 2010) Retrospective Policy Analysis Case Study	Disparities in the country	Advocacy Coalition Framework	Oral Health Promotion	Coalition Groups: Health Promotion, Maternal and Child Health, HIV/AIDS Unit, Nutrition	Gather research – documents Explore belief systems Frame issue	Activity in the Implementation Phase **Partially Implemented** Illustrates that health policy was found to be strong on the rhetoric of equity, health promotion, integration and several other features of the approach, but showed little evidence of translating this into action. The development and implementation Of oral health promotion appears to be dominated by the influence of dental professionals that perpetuate a curative focus on service delivery. This highlights the need for centralized core beliefs in addressing a problem through policy. Theory informed understanding of the policy issue
(Breton, Richard, Gagnon, Jacques, & Bergeron, 2008)	Political debates on tobacco and the economy Effects on youth	Advocacy Coalition Framework	Tobacco Control	18 Regional public health directorates Public health and health actors	Research and gather knowledge of the public health issue monitoring	Activities in the policy implementation phase **Policy Implemented** Highlights the role government agencies play in influencing adoption and the need for public health agencies to do more policy analysis in

Retrospective Policy Analysis Case Study	Change in administration (Clinton era)					the context of frameworks. Also the critical contribution of coalitions pooling resources is highlighted as well as the need for media advocacy to foster policy change. It emphasizes how stable parameters, external events, constraints and resources can all lead to in this case the tobacco policy system which can have supporters and opponents. Theory informed understanding of the policy issue.
(Vaughn, 2010) State Policy Case Assessment	Not addressed	Media Advocacy	Oral Health	Media, Pubic health coalitions, oral health professionals	Campaigns, awareness Agenda proposals mass media	Agenda setting phase **and problem identification** This series of case studies based on state implementation of public awareness campaigns, illustrates how mass media can influence policy formulation. Several states enacted policies to address access to care, oral health literacy and other barriers. Public Awareness was a key strategy. While a less methodological formal approach to the study, the theory of media influence informed understanding of the policy issue

(El-Jardali, Bou-Karroum, Ataya, El-Ghali, & Hammoud, 2014) Retrospective Policy Analysis Case Study	Financial Deficit and Failure , layoffs	Multiple Streams Theory	Health Insurance	NSSF Officials, Members of the Cabinet, Ministry officials	Strategies to enhance the use of evidence and enhancing accountability Media opened window of opportunity	Policy Implementation phase **Not Implemented** Major actors were government officials. Consistent with Kingdon's theory this study illustrated how a policy window opened when the three streams converged. The problem stream was illustrated by the emergence of the MEA employees' crisis. While the political stream was the pressing demand of the MEA employees representing a specific sect opposing the government and the existence of new government. While the politics and policy streams agreed on the formulation of the policy to address the problem, they differed on the implementation of policy. Theory informed understanding of the policy issue
Gladwin et al. , 2008 Retrospective Policy Analysis Case Study	Daily Energy Expenditures Youth affected	Multiple Streams Theory	Physical Activity	Minister of Education, Health professionals Nonprofit organizations	Activities to enhance awareness	Activities in Agenda-Setting and Formulation phase **Policy adopted-PA in schools But not transportation imitative** Highlights the importance of presenting the strongest policy solutions and framing the public issue as it relates to the policy solution. Also

						highlights deficits in implementation when resources are not allocated effectively. Theory informed understanding of the policy issue
(Gwozdek et al., 2014) Retrospective Policy Analysis Case Study	Structural barriers to health care Economic considerations on state Certain populations affected	Multiple Streams Theory	Access to Oral Healthcare	Dental organizations, hygienists, legislators, interest groups, media Policy entrepreneur	Activities to enhance awareness, lobbying Change public opinion	Activities in agenda-setting and implementation phase **Policy implemented** Highlights the need for Policy entrepreneurs to come up with ideas to solve a problem. Colleen Brickle, Dean of Health Sciences at Normandale Community College (NCC)) initiated steps. This also highlights the need for good partnering. (The NCC partnered with a 4 yr-University in the state to further develop proposal). This case also highlights the need for establishing alliances and support for the legislation Theory informed understanding of the policy issue

Summary of the Theories and Frameworks

Multiple Streams Theory Comparative look at the streams

Table 10 Summary of Streams

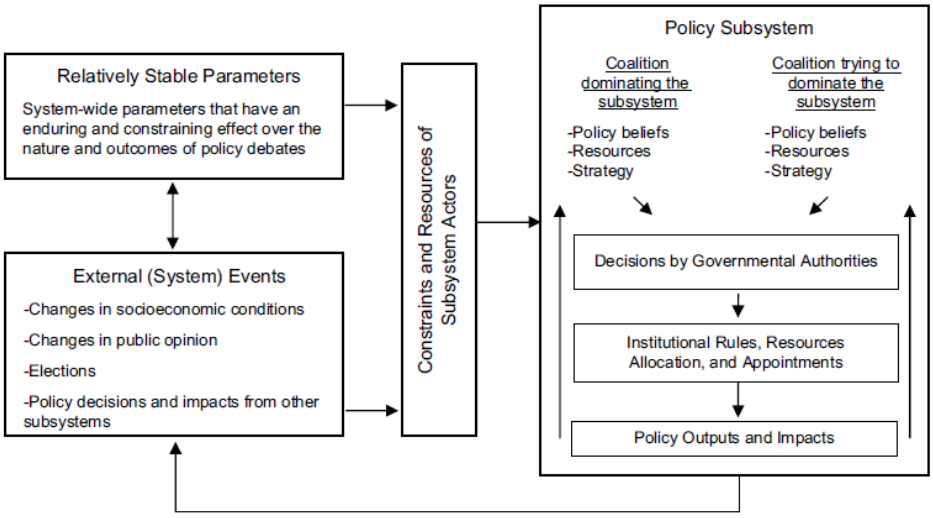
(El-Jardali, et al.,2014) Problem- Insurance needs was illustrated by the emergence of the MEA employees' crisis. Policy-The existing NSSF law article presented the policy stream to address the problem, Politics- Pressure from MEA
(Craig, Felix, Walker, & Phillips, 2010) Problem- childhood obesity Policy Stream – Hearings on healthy school vending content Politics Stream- Task Force Impact Report presented to women legislators
(Mc Hugh, Perry, Bradley, & Brugha, 2014) Problem- Diabetes Policy - Existing groundwork, Formal Management programs Politics- Lobbying by groups
(Laraway & Jennings, 2002) Problem Stream- Uninsured Policy- The Family Care Act of 2001 Politics -Organized groups pressuring Bush Administration
(Gladwin et al. , 2008) Problem-Physical inactivity in children Policy- 1) Parent-organized active transportation initiatives 2) Provide daily Physical activity in Schools *Two policies proposed Politics- 1) Physician becomes Minister of Education 2) Advocacy by non-profit organizations
(Gwozdek et al., 2014) **Problem-** oral health care need for underserved populations **Policy-** Midlevel providers as an additional workforce **Politics-**Shifting accountability and public opinion

Advocacy Coalition Framework

The Advocacy Coalition Framework looks at four dimensions: The Relatively Stable Parameters; External System Events; Constraints and Resources of Subsystem Actors; and the policy subsystem (Coalition Dominating the subsystem, and coalition trying to dominate the subsystem) (See figure 7). According to the advocacy coalition framework process, as noted in (Singh, et al., 2015), policy change is a function of both competition within the subsystem and events outside the subsystem, thus favoring critical thinking. Shared beliefs rather than interests form the basis for advocacy coalitions and since people's beliefs are resistant to change,

coalitions are stable over a period of time. All three studies had relatively stable parameters and similar external forces but varying subsystems which possibly influenced outcomes.

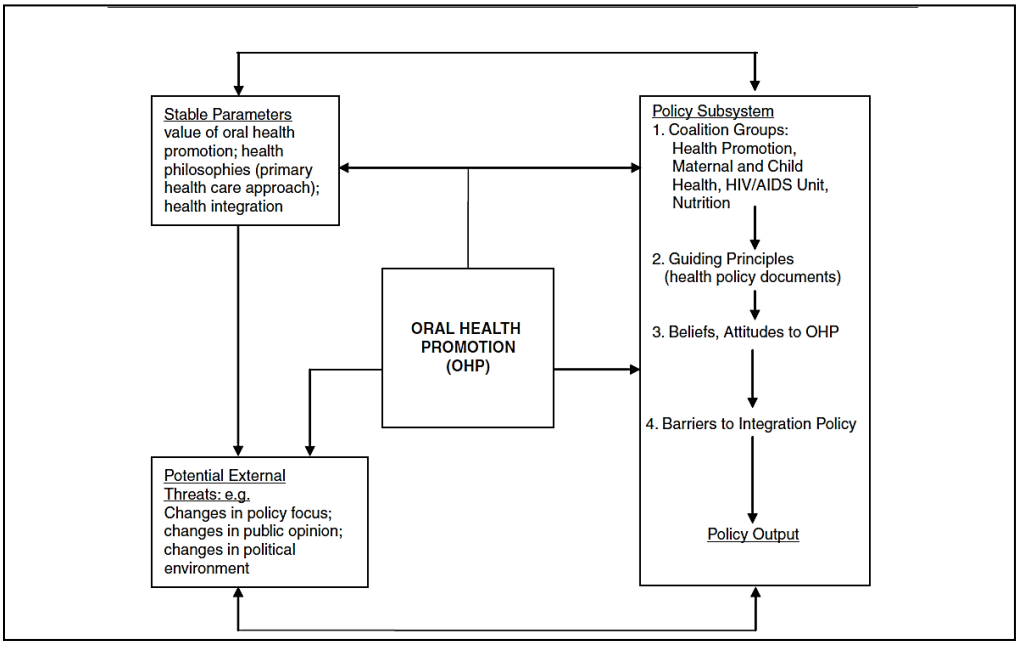
Figure 4 Advocacy Coalition Framework



Adapted from Sabatier & Jenkins-Smith (1993).in (Breton et al., 2008)

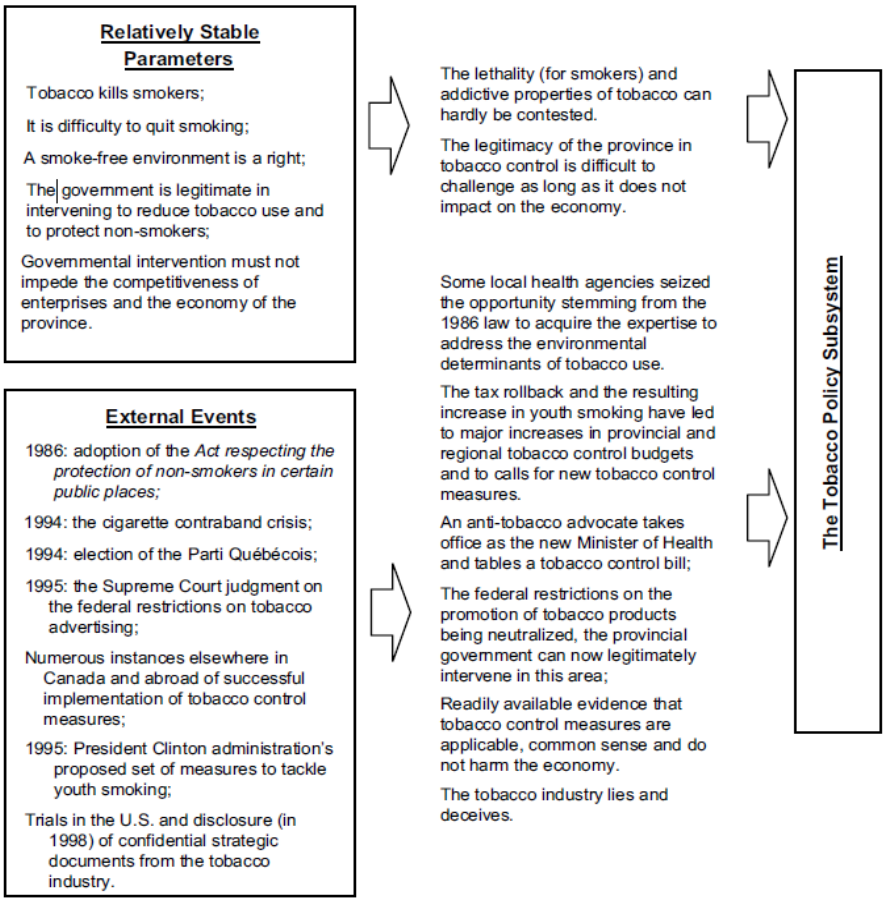
The following are a comparative look at the three ACF articles components.

Figure 5 AFC and Oral Health Promotion



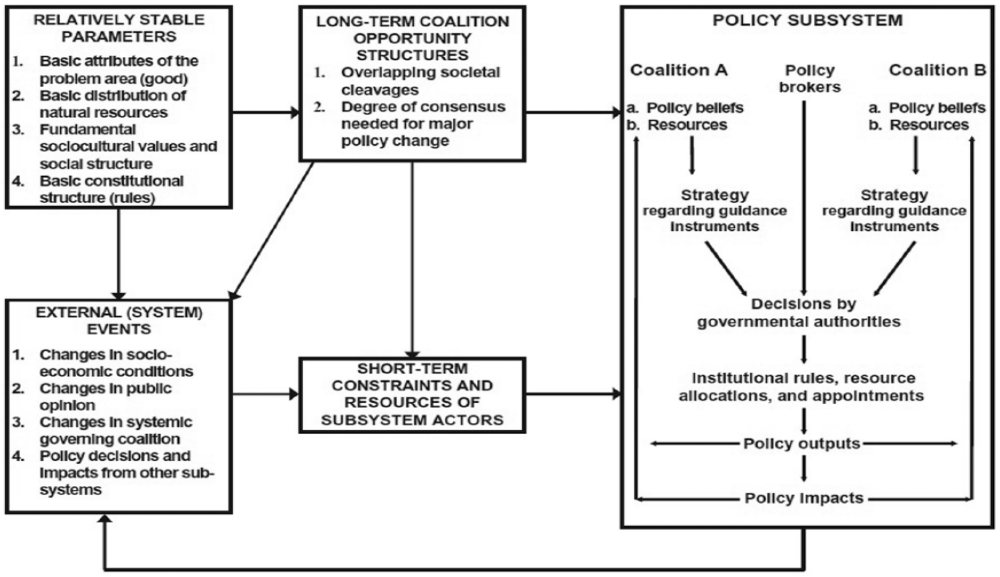
Adapted from (Singh et al., 2010)

Figure 6 AFC and Tobacco



Adapted from (Breton et al., 2008)

Figure 7 ACF and Nutrition



Adapted from (Dinour, 2015)

In the (Singh, et al) study researchers hypothesized that to successfully influence the processes of oral health promotion through policy; this required good ideas and policy evidence documents. As a result of this policy analysis this informed a better understanding that it requires widespread stakeholder support necessary to carry them through to funding and implementation. The difference in outcomes is the (Dinour, 2015) study and the (Breton, et al., 2009) study seemed to both have stronger coalitions and capacity.

The Racial Equity Framework

Although the literature provided several models of this concept, this framework from (Dennis, et al., 2012) and the Greenlining Institute provides a prospective analysis case study to show the implementation implications of the policy process as they are related to ensuring racial equity. Data was collected from a variety of sources in order to answer the guiding questions. While this framework uses intersectionality and this is a great framework in theory, the study did not provide the results of using the guidelines. It does note some findings that California failed to follow in these guidelines but it does not show if this related back to failure of equitable implementation.

Media Influence Theory

The (Vaughn, 2009) case study notes that arguably, the ultimate application of evidenced-based communications is translating the research recommendations into a full-fledged media campaign. This study evaluated the campaign known as Watch Your Mouth and provided insight into the influence of media through campaigns that could influence policy development. It has been implemented in four states, and as a result the perceptions of children's oral health changed and policies implemented. It is built upon the context of "Reframing" the issue of

children's oral health so that the public reconsiders the issue, and is more likely to support the public policy solutions necessary to improve children's oral health.

The Messaging and Framing Theory

As noted previously, the literature search did not reveal any independent case studies based solely others theory. However, almost all of the 10 case studies revealed some element of the importance of framing and messaging. Most of the studies noted this as an important component specifically in identifying the problem.

CHAPTER 5: DISCUSSION

Discussion

The intent of this thesis was to seek a better understanding of how advocacy efforts in the policy arena could be maximized to ensure the issues of oral health are heard, identified and formulated into good health policy that could improve oral health equity. As noted in the limitations of this study, the ideal methodology had its challenges in order to fully understand the scope of the problem and truly explore the role of theory versus simply identifying them. Ideally it would have been necessary to assess more studies than the 11 articles retrieved, to grasp an even better understanding but this was limited by the citations produced specific to inclusion criteria of this topic. The articles assessed, provided some clarification on the role of theories in these efforts, while not prescriptively the studies did outline the linkages (according to their theories) to show correlation of the factors influencing the policy process.

The policy process by which the public policies were created and changed was complex and varied significantly from one policy issue to the next in these case studies. Many of the studies emphasized the importance of using several sources of input into the policymaking process including political judgment, scientific research, and expert opinion in implementation of policies. While there is a necessity to emphasize the critical role of policy analysis, these case studies provided examples of evaluating policies and advocacy efforts through the lens of theory.

In all of the eleven studies, when polices such as Act1220, the tobacco control act, food nutrition polices, oral health promotion/ access polices, racial equity implementation of the ACA, and insurance/access were viewed through the theoretical framework guiding these studies, there was a better understanding to the researcher of the linkages between the activities and the outcomes, as well as the actors involved.

Whether at the federal, state, local, or agency level, as demonstrated in all six of the Multiple Stream Theory cases, public health professionals must understand their policy environment and not lose a moment in recognizing the convergence of the 3 streams and ‘‘champion’’ policy entrepreneurs. Many of these studies outlined the correct balance of strategic planning and timely responses to policy windows.

The coalition theory implies shared belief systems on health priorities, selection of interventions for service delivery and health management as important factors to consider in health policy analysis. It fails to provide a satisfactory explanation on how conditions leading to policy oriented collective action takes place and on how disputes between actors are prevented and resolved to secure an alliance. The theory on coalition structuring described in the (Singh, et al., 2010) study meets these shortcomings presented by attempting to identify the challenges or constraints and strategies of actors trying to influence the policy process. This is essential for oral health advocacy given the many debates on how to best address access to care issues.

The findings from this study revealed some promising theories and frameworks that can be applied to advocacy activities to advance oral health equity. While oral health has seen its establishment of alliances between dental organizations, state oral health coalitions and other public-private partnerships to promote oral health, based on these findings, the ACF may not be the best model for health equity issues, simply due to the ethical underpinnings of the topic and even though there may be similar missions between groups, the core beliefs in how to solve a problem may differ. A more promising strategy for this public health issue based on these findings is the MST superimposed with strategic framing of the issue, messaging and media advocacy. This was demonstrated in (Gwozdek et al., 2014) and the Minnesota Mid-level provider case study where it outlines how the problem stream served to demonstrate oral health

care need, while the political stream shifted accountability and public opinion, which led to the policy stream and policy changes.

The Racial-Equity framework provided a guided model that can assist in prospective analysis to guide states implementing the ACA and for those states still considering Medicaid Expansion, whereas the framing and messaging are critical overlapping components.

Although the studies in this review did not adequately attribute to the complex nature of oral health disease burden, overlaid with disparities, the comparative studies, many of which included risk factors and contributing factors for oral disease burden, provided a great implication of the role theory plays in the policy process.

Implications

Based on the findings, the following are implications for oral health advocates, public health and dental organizations:

- Building up policy analysis capacity is critical in seizing the opportunities to influence the policy process. For instance, dental organizations, public health agencies and others wishing to bring about changes to oral health equity, need to devote resources to the monitoring of the policy actors involved or likely to be impacted by the changes
- Based on the findings, it is apparent that policy analysis is a crucial tool that organizations can use to evaluate policies such as the ACA, Medicaid expansion and Emerging Workforce legislation and how they have or can affect the public's oral health. From the general literature review, this had been done but there was only one study that could be located that used a policy theory to carry out the analysis.
- A policy entrepreneur and "champion" for oral health is a key ingredient to success. This was demonstrated in the studies and it is very apparent from the Deamonte Driver case.

Policy Engagement Strategies for Oral Health Advocates

Table 11 Policy Engagement Strategies

Racial Equity Framework Application to Advocacy
• Include input from diverse stakeholders throughout the implementation process
• Collaborate with trusted community resources
• Improve language access and cultural competency
• Create a system in which citizens can easily access information about health and dental insurance, enrollment, and needed oral health care
• Advocate at the federal level for policies that protect implementation at the state and local level
Modified from (Stachowiak, 2013)

Multiple Streams Theory Application to advocacy	**Advocacy Coalition Framework** Application to advocacy	**Messaging and Frameworks Theory** Application to advocacy	**Media Influence Theory** Application to Advocacy
• Impacting problem definition (i.e., framing the oral health issue, monitoring indicators that assess the existence and magnitude of the oral disease burden, initiating special studies of, promoting constituent feedback • Developing policy options (e.g., through dental research, publications, etc.) • influencing the political climate (e.g., oral health coalition building, demonstrations, and media advocacy) • Advocates and organizations need adequate capacity to create and/or recognize policy windows and then respond appropriately.	• Influencing like-minded decision makers to make policy changes • Changing incumbents in various positions of power • Affecting public opinion via mass media • Altering decision maker behavior through demonstrations or boycotts • Changing perceptions about oral health policies through research and information exchange.	• Issue framing (or re-framing oral health and health equity messages), message development, targeted communications, or media advocacy. • This theory is likely embedded as one strategy in a broader communications campaign rather than as a stand-alone activity. Implement with other theories. • Frame dental messages around the evidence of oral disease burden and tell the story using real life examples.	• Efforts are focused on the broader public as opposed to a targeted audience or decision maker and can raise the prominence of an issue, which may or may not change public will around the issue. • Promising strategies include news media and social media campaigns, as well as general communications on oral health issues. • According to this theory, media and communications work should be coupled with advocacy toward decision makers who will act upon issues that have risen on the public agenda and/or build a base of support to take action on an agenda that has reached a high level of salience.

Modified from (Dennis et al., 2013)

Conclusion

To conclude, our research has demonstrated the benefits for the practice of grounding policy analysis within a theoretically sound endeavor, so that opportunities can be created to influence the policy process in promoting oral health equity. Based upon these findings, theoretically-grounded advocacy is a key public health strategy not only to make policy systems work better, particularly for vulnerable and underserved populations, but also to counteract the efforts of opposing interest groups to implementation of good public health practice. In the Tobacco Control Act study, there was much opposition to the formulation of this act from interest groups. This is often the scenario of many public health strategies to improve oral health equity from community water fluoridation to proposed emerging workforce models.

This study provided a practical idea that can be used in many of my platforms to assist in promoting oral health equity. As a Dentist, public health official, community activist and leader of a national organization, I have personally seen the outcomes of lack of access to care; therefore public health advocacy has been at the forefront of activities. To date, presenting evidence, research and statistics has seemingly been the best approach in legislative arenas with attempting to influence policy action, but what has become apparent from this literature review is a need to understand "how best" to present this evidence and what factors influence it reception.

As oral health advocates we can be better informed with a theory guided framework approach to the policy process and its application to advocacy in order to optimally influence public policies that promote oral health equity. Lastly, the findings from this literature review indicate that more research is needed and significantly more theory-grounded policy analysis studies should be performed and highly recommended that are applicable to oral health equity.

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Appendix 1 Racial Equity Framework Guiding Principles and Questions

Guiding Principles	
Diversity and Inclusion	Recruit diverse community stakeholders – including but not limited to racial and ethnic minorities, women, youth, and LGBTQ individuals – and involve them as active participants in all stages of decision-making, policy-implementation, and program evaluation processes.
Transparency and Accountability	Maintain openness and fairness to diverse communities, such as low income communities, communities of color, and geographically isolated communities in all phases of planning, decision-making, program development, program implementation, documentation, program evaluation, and advocacy.
Healthy Environments	Pay active attention to eliminating existing disparities to achieve outcomes that maximize the health, safety and well-being of all individuals and communities.
Equal Opportunity	All individuals should have full and fair access to opportunities and benefits of resulting policies and programs without bias, unnecessary barriers or extra burden.
Accessibility	Ensure that all individuals receive the basic information, resources, and necessary to create healthy and prosperous futures opportunities for themselves and their children.
Sustainability	Implement equity-enhancing programs and policies with the support, protections, and enforcement necessary for long-term positive impact in diverse communities.

Guiding Questions		
Gathering Information	Review the purpose of the policy that will be implemented and begin identifying additional information needed to ensure equitable outcomes.	1. What specific issue(s) are we intending to address? 2. What is the purpose of the policy we are making and/or implementing? 3. What quantitative and qualitative evidence of inequity exists around the issue that this policy is supposed to address? 4. How might implementation play out differently in different communities? 5. What additional information is missing or needed?
Engaging Stakeholders	Assemble a team of stakeholders with diverse perspectives who can help policymakers holistically analyze the implementation process. Any policy-driven process should include robust stakeholder input to ensure successful implementation	1. Who are the stakeholders (including community members and members of various racial/ethnic groups) who may be positively or negatively affected by this policy? 2. How can we engage potentially affected stakeholders as active participants in the decision-making, planning, and implementation processes in an impactful way? 3. Are we meaningfully considering the needs and concerns of stakeholders during final Decision-making processes? 4. Who is missing and how can we engage them?

Identifying Policy Holes	Identify the positive and negative outcomes that a policy would have in diverse communities if implemented without recognizing the unique circumstances of various racial and ethnic groups. The input of diverse community stakeholders is extremely valuable during this step.	1. What adverse impacts or unintended consequences could result from this policy if enacted as written? 2. How would different racial and ethnic groups be impacted (either positively or negatively) if this policy were enacted or implemented as written? 3. What additional barriers might prevent individuals in certain racial/ethnic groups from benefitting fully if this policy were implemented as written? a. Consider language, gender, SES, digital inequality, LGBTQ status, (dis)ability, employment status, immigration status, education level, geography, environment, religious beliefs, culture, history of incarceration, etc.
Filling in the Holes	Identify additional steps policy-implementers and advocates should take to ensure that the policy will impact all communities positively and equitably	1. What steps could we take to prevent or minimize adverse impacts or unintended consequences? 2. What steps could we take to address additional barriers that could prevent various racial/ethnic groups from accessing the policy fully? 3. Are there further ways to maximize equitable outcomes?
Examining Sustainability	Ensure that the implementation process and its equity framework are both transparent and sustainable.	1. Do this policy and additional equity-enhancing measures related to this policy have adequate funding? Are mechanisms in place to ensure successful implementation and enforcement? 2. Are there provisions to ensure ongoing stakeholder participation and public accountability of policy implementers and enforcers?
Evaluation	Measure the success of equitable policy implementation.	1. Are there provisions to ensure ongoing collection of data (that can be disaggregated by race/ethnicity) and public reporting of data? 2. Are there clear markers of short term and long term success as well as timelines for meeting markers of success? 3. What are the mechanisms we will utilize to ensure that goals are met? 4. What are the consequences if goals are not met? 5. Is there a process for those impacted by the policy to express grievances or satisfaction and to ensure that concerns are met?

Cited from (Dennis et al., 2013)

Appendix 2 PICO Worksheet

PICO Worksheet and Search Strategy
Name_____

1. Define your question using PICO by identifying: Problem, Intervention, Comparison Group and Outcomes.

Your question should be used to help establish your search strategy.
Patient/Problem_____
Intervention_____
Comparison_____
Outcome_____
Write out your question:_____
_____

2. Type of question/problem: **Circle one:** Therapy/Prevention Diagnosis Etiology Prognosis
3. Type of study (Publication Type) to include in the search: **Check all that apply:**
❑ Meta-Analysis ❑ Systematic Review ❑ Randomized Controlled Trial
❑ Cohort Study ❑ Case Control Study ❑ Case series or Case Report
❑ Editorials, Letters, Opinions ❑ Animal Research ❑ In Vitro/Lab Research

4. List main topics and alternate terms from your PICO question that can be used for your search List your inclusion criteria –gender, age, year of publication, language List irrelevant terms that you may want to exclude in your search

5. List where you plan to search, i.e. EBM Reviews, Medline, AIDSLINE, CINAHL, PubMed

Appendix 3 Qualitative Assessments- Critical Review Form– Qualitative Studies (Version 2.0)
© Letts, L., Wilkins, S., Law, M., Stewart, D., Bosch, J., & Westmorland, M., 2007 (adapted)

Criteria	(Laraway & Jennings, 2002)	(Dennis et al., 2013)	(Craig et al., 2010)	(Mc Hugh et al., 2014)	(Dinour, 2015)	(Singh et al., 2010)	(Breton et al., 2008)	(Vaughn, 2010)	(El-Jardali et al., 2014)	(Gladwin et al. , 2008)	(Gwozdek et al., 2014)
STUDY PURPOSE: Was the purpose and/or research question stated clearly? □ yes □ no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
LITERATURE Was relevant background literature reviewed? □ **yes** □ **no**	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
STUDY DESIGN: What was the design? phenomenology ethnography grounded theory participatory action research other	Grounded theory	Grounded theory	Grounded theory	Grounded theory	Grounded theory	Grounded theory	Grounded theory	Not explicitly identified but was implied theory of media influence	Grounded theory	Grounded theory	Grounded theory
Was a theoretical perspective identified? □ **yes** □ **no**	yes	yes	yes	yes	yes	yes	yes	No but implied	yes	yes	yes
Method(s) used: □ participant observation □ interviews □ document review □ focus groups □ other	Not specifically identified but assumed document review	Primary data through needs assessment Secondary through document review	Document review Key informant interviews Multiple reviewers	Semi structured interviews complemented by document review	Document review Key informant interviews	Document review Key informant stakeholder interviews	Document review and Semi structured interviews	Not specifically identified but assumed document review	Document review Media review Key informant interviews	Document review and interviews	Scholarly research, government and foundation agency reports, interviews with leaders involved in the mid-level

											dental practitioner initiative, news articles, and Minnesota statute.
SAMPLING: Was the process of purposeful selection described? □ yes □ no	no	no	yes	yes	yes	yes	yes	no	yes	yes	no
Was sampling done until redundancy in data was reached? □ yes □ no □ not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Was informed consent obtained? □ yes □ no □ not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Yes from Interviewees	Not addressed	Not addressed
DATA COLLECTION Descriptive Clarity Clear & complete description of site: □ yes □ no participants: □ yes □ no Role of researcher & relationship with participants: □ yes □ no Identification of assumptions and biases of researcher: □ yes □ no	Clarity-No Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researcher and relationship not addressed Assumption and biases not identified	Clarity-Yes Role of researched not discussed Potential bias identified and addressed	Clarity-Yes Role of researched not discussed Potential bias identified and addressed	Clarity-Yes Role of researched not discussed Potential bias not identified
Procedural Rigor Procedural rigor	no	no	yes	yes	yes	yes	yes	no	yes	yes	no

was used in data collection strategies? yes no not addressed											
DATA ANALYSES: Analytical Rigor Data analyses were inductive? yes no not addressed Findings were consistent with & reflective of data? yes no	No Inductive analysis Findings were consistent with data but not conclusive to inform understand-ing of the data.	No	Yes Inductive analysis Consistent findings	Yes Inductive analysis Consistent findings	Yes Inductive analysis Consistent findings	Yes Inductive analysis Consistent findings	Yes Inductive analysis Consistent findings	No	Yes Inductive analysis Consistent findings	Yes Inductive analysis Consistent findings	No analytical rigor analysis Consistent findings
Auditability Decision trail developed? yes no not addressed Process of analyzing the data was described adequately? yes no not addressed	Analysis process not addressed	Analysis process not described in much detail	Analysis process addressed adequately	Analysis process addressed adequately	Analysis process addressed adequately	Analysis process addressed adequately	Analysis process addressed adequately	Analysis process not addressed	Analysis process addressed adequately	Analysis process addressed adequately	Analysis process not addressed adequately
Theoretical Connections Did a meaningful picture of the phenomenon under study emerge? yes no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
OVERALL RIGOUR Was there evidence of the four components of trustworthiness Credibility yes no Transferability yes no	C=Yes T=No D=No C=No	C=possibly T= possibly D=-possibly C=yes	C=Yes T=Yes D=Yes C=Yes	C=Yes T=Yes D=Yes C=Yes	C=Yes T=Yes D=Yes C=Yes	C=Yes T=Yes D=Yes C=Yes	C=Yes T=Yes D=Yes C=Yes	C=possibly T= possibly D=-possibly C=No	C=Yes T=Yes D=Yes C=Yes	C=Yes T=Yes D=Yes C=Yes	C=Yes T=Yes D=Yes C=No

Dependability □ yes □ no Conformability □ **yes** □ **no**											
Implications Conclusions Appropriate given the study findings? □ yes □ no The findings contributed to theory development & future OT practice/ research? □ yes □ no	Appropriate conclusions could not be determined based on lack of methodological content Contributed to theory development	Appropriate conclusions Contributed to theory development	Appropriate conclusions Contributed to theory development	Appropriate conclusions Contributed to theory development	Appropriate conclusions but limited explanation Contributed to theory development	Appropriate conclusions but limited explanation Contributed to theory development	Appropriate conclusions but limited explanation Contributed to theory development	Appropriate conclusions but limited explanation Contributed to theory development	Appropriate conclusions Contributed to theory development	Appropriate conclusions Contributed to theory development	Appropriate conclusions Contributed to theory development
Peer Reviewed	yes	Not determined	yes	yes	yes	yes	yes	Not determined	yes	yes	Not determined
Relevance to thesis research questions	yes	yes prospective analysis case	yes	Yes	yes	Yes	yes	yes (although not a formal policy analysis case	yes	yes	yes

Appendix 4 Search Strategy

Original Search conducted on January 26, 2016

PubMed

Search (access to care) AND Sabatier	20
Search ((access to care) AND Kingdon) AND policy	5
Search (Midlevel provider) AND Kingdon	0
Search ((Messaging and Framing)) AND policy theory	1
Search (insurance) AND Kingdon	1
Search (policy analysis case study) AND Kingdon	8
Search ((agenda setting) AND theory) AND policy	33
Search (policy process) AND Dennis	22
Search (policy process) AND Kingdon	11
Search (policy framework) AND Kingdon	11
Search ((Media Influence) AND policy) AND theory	27
Search ((McCombs) AND theory) AND policy	0
Search ((framing) AND policy) AND theory	75
Search ((health equity) AND Kingdon) AND policy	0
Search ((Sabatier) AND oral health) AND policy	2
Search ((Kingdon) AND oral health) AND policy	2
Search ((dental) AND policy analysis) AND theory	27
Search ((oral health) AND policy analysis) AND theory	14
Search ((policy) AND Amos) AND oral health	0
Search (((policy) AND theory) AND case study) AND Kingdon	2
Search ((Policy analysis) AND Affordable Care Act) AND theory	3
Search ((Policy analysis) AND framing) AND theory	43
Search ((Policy analysis) AND theory) AND Sabatier	1
Search ((Policy analysis) AND theory) AND Kingdon	3

An abbreviated search was used for all of the other databases.

CINAHL and Ovid (Sage Journals) were the biggest producers of the most relevant articles.

policy AND messaging AND framing	Search modes - Boolean/Phrase	Database - CINAHL	2
policy AND Tversky	Search modes - Boolean/Phrase	Database - CINAHL	1
policy AND Sabatier	Search modes - Boolean/Phrase	Database - CINAHL	8
policy AND Kingdon	Search modes - Boolean/Phrase	Database - CINAHL	40